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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,117	01/16/2001	Raju S.K. Chaganti	43771-A-PCT-US-Y/JPW/EMW	3093

7590 09/22/2003

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EXAMINER	
ROMEO, DAVID S	
ART UNIT	**PAPER NUMBER**
1647	17

DATE MAILED: 09/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/761,117	CHAGANTI ET AL.	
	Examiner	Art Unit	
	David S Romeo	1647	

-- Th MAILING DATE of this communication app ars on the cover sh et with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 August 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *47-56* is/are pending in the application.

4a) Of the above claim(s) *47-55* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

[redacted]

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 5, 2003 has been entered.

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 54 has been renumbered 56.

Claims 47-56 are pending. Claims 47-55 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 9. Claim 56 is being examined.

Claim Rejections - 35 USC § 112

Claim 56 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of detecting the presence of a polypeptide comprising the amino acid sequence of SEQ ID NO: 2 in a tumor sample,

does not reasonably provide enablement for determining the likelihood that a tumor suspected of being a non-Hodgkin's lymphoma (NHL) is a NHL. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

The claims are directed to or encompass a method comprising detecting the presence of a polypeptide having the amino acid sequence of SEQ ID NO: 2 in a tumor sample with an antibody that binds said polypeptide and the presence of said polypeptide indicating that it is likely that the tumor is a NHL. SEQ ID NO: 2 is the amino acid sequence of BCL-6 (the present specification at page 7, lines 30-31). The BCL-6 gene is known to be located on chromosome 3q27, at the breakpoint of the 3q27-associated translocations that occur frequently in human non-Hodgkin's lymphomas (NHLs). See Onizuka (V, PTO-892 2002-12-02), Abstract. However, BCL-6 is expressed in both normal and neoplastic B-cells. See Onizuka (V, PTO-892 2002-12-02) at page 28, paragraph bridging left and right columns. Further, BCL-6 expression cannot discriminate neither between normal and neoplastic GC-derived B cells, nor between DLCL carrying a normal or a rearranged BCL-6 gene. It remains to be tested whether BCL-6 expression can be clinically useful in determining the GC-origin of neoplastic cells and therefore in helping the differential diagnosis of lymphoma. See Cattoretti (U, PTO-892 2003-09-19), page 52, right column, last paragraph. There is nothing in the present specification or in the prior art of record suggesting that the mere presence of SEQ ID NO: 2 is useful for the differential diagnosis of NHL. There are no working examples in the present specification of the differential diagnosis of NHL from a tumor sample suspected of being a NHL using an antibody that binds to a polypeptide having

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the amino acid sequence of SEQ ID NO: 2. The present specification lacks guidance for using the presence of BCL-6 as an indicator that a tumor sample is likely a NHL. To practice the invention in a manner commensurate with the breadth of the claims would not require just a repetition of work that is described in the instant application but a substantial inventive contribution on the part of a practitioner which would involve the determination of how to differentially diagnosis NHL with an antibody that binds to a polypeptide having the amino acid sequence of SEQ ID NO: 2. It is this additional characterization of BCL-6 expression that is required in order to obtain the data needed to permit one to differentially diagnose a NHL that constitutes undue experimentation.

In re Fisher, 427 F.2d 833, 166 USPQ 18 (CCPA 1970) held that:

> "Inventor should be allowed to dominate future patentable inventions of others where those inventions were based in some way on his teachings, since such improvements, while unobvious from his teachings, are still within his contribution, since improvement was made possible by his work; however, he must not be permitted to achieve this dominance by claims which are insufficiently supported and, hence, not in compliance with first paragraph of 35 U.S.C. 112; that paragraph requires that scope of claims must bear a reasonable correlation to scope of enablement provided by specification to persons of ordinary skill in the art; in cases involving predictable factors, such as mechanical or electrical elements, a single embodiment provides broad enablement in the sense that, once imagined, other embodiments can be made without difficulty and their performance characteristics predicted by resort to known scientific laws; in cases involving unpredictable factors, such as most chemical reactions and physiological activity, scope of enablement varies inversely with degree of unpredictability of factors involved."

In view of the breadth of the claims, the limited amount of direction and working examples provided by the inventor, the unpredictability in the art and the quantity of experimentation needed to make or use the invention based on the content of the

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disclosure, it would require undue experimentation for the skilled artisan to make and/or use the full scope of the claimed invention.

It is suggested that the claims be limited to a method of detecting the presence of a polypeptide having the amino acid sequence of SEQ ID NO: 2 in a tumor sample.

Applicant's arguments have been fully considered but they are not persuasive. It remains to be tested whether BCL-6 expression can be clinically useful in helping the differential diagnosis of lymphoma. Immunohistochemical methods of binding an antibody to an intracellular protein are not an issue in the present rejection.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 56 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The terms "likelihood" and "likely" indicate that a NHL is within the realm of credibility, plausible, or probable. The claims do not require a tumor that is suspected of being a NHL and that contains a polypeptide having the amino acid sequence of SEQ ID NO: 2 actually be a NHL. As noted by applicant in the reply filed June 5, 2003 at page 4, full paragraph 2, the claimed method does not provide a method for the diagnosis of NHL. Accordingly, it is unclear what method steps are encompassed, accomplished, or achieved by the terms "likelihood" and "likely." The metes and bounds are not clearly set forth.

Conclusion

Claim 56 is not allowable.

ANY INQUIRY CONCERNING THIS COMMUNICATION OR EARLIER COMMUNICATIONS FROM THE EXAMINER SHOULD BE DIRECTED TO DAVID S. ROMEO WHOSE TELEPHONE NUMBER IS (703) 305-4050. THE EXAMINER CAN NORMALLY BE REACHED ON MONDAY THROUGH FRIDAY FROM 7:30 A.M. TO 4:00 P.M.

IF ATTEMPTS TO REACH THE EXAMINER BY TELEPHONE ARE UNSUCCESSFUL, THE EXAMINER'S SUPERVISOR, GARY KUNZ, CAN BE REACHED ON (703) 308-4623.

IF SUBMITTING OFFICIAL CORRESPONDENCE BY FAX, APPLICANTS ARE ENCOURAGED TO SUBMIT OFFICIAL CORRESPONDENCE TO THE FOLLOWING TC 1600 BEFORE AND AFTER FINAL RIGHTFAX NUMBERS:

BEFORE FINAL (703) 872-9306
AFTER FINAL (703) 872-9307

IN ADDITION TO THE OFFICIAL RIGHTFAX NUMBERS ABOVE, THE TC 1600 FAX CENTER HAS THE FOLLOWING OFFICIAL FAX NUMBERS: (703) 305-3592, (703) 308-4242 AND (703) 305-3014.

CUSTOMERS ARE ALSO ADVISED TO USE CERTIFICATE OF FACSIMILE PROCEDURES WHEN SUBMITTING A REPLY TO A NON-FINAL OR FINAL OFFICE ACTION BY FACSIMILE (SEE 37 CFR 1.6 AND 1.8).

FAXED DRAFT OR INFORMAL COMMUNICATIONS SHOULD BE DIRECTED TO THE EXAMINER AT (703) 308-0294.

ANY INQUIRY OF A GENERAL NATURE OR RELATING TO THE STATUS OF THIS APPLICATION OR PROCEEDING SHOULD BE DIRECTED TO THE GROUP RECEPTIONIST WHOSE TELEPHONE NUMBER IS (703) 308-0196.

DAVID ROMEO
PRIMARY EXAMINER
ART UNIT 1647

DSR
2003-09-19

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